

BAGDOYEV, A.G.

Determining the pressure at the front of a shock wave in a half-space. Vest. Mosk. un. Ser. 1: Mat., mekh. 15 no.5:49-52 S-O '60.
(MIRA 13:11)

1. Institut matematiki i mekhaniki AN Armyanskoy SSR.
(Shock waves)

BAGDOYEV, A.G.

Explosion in a plastic gas. Dokl. AN Arm. SSR 30 no.2:
73-76 '60. (MIRA 13:6)

1. Institut matematiki i mekhaniki Akademii nauk
Armenyanskoj SSR. Predstavleno chlenom-korrespondentom
AN Armenyanskoj SSR S.A. Ambartsyumyanom.
(Explosions)

BAGDOYEV, A.G.; NERSISYAN, E.M.

Penetration of an arbitrary pressure into a compressible
fluid. Dokl.AN Arm.SSR 30 no.3:135-138 '60.

(MIRA 13:8)

1. Institut matematiki i mekhaniki Akademii nauk Armyanskoy
SSR.

(Compressibility)

BAGDOYEV, Aleksandr Georgiyevich; AMBARTSUMYAN, G.A., otv. red.;
SLKUNI, A.G., red.izd-va; AZIZBEKYAN, L.A., tekhn. red.

[Three-dimensional nonstationary motions of a continuous medium
with shock waves] Prostranstvennye nestatsionarnye dvizhenia
sploshnoi sredy s udarnymi volnami. Erevan, Izd-vo Akad.nauk
Armianskoi SSR, 1961. 274 p. (MIRA 15:2)
(Fluid dynamics) (Shock waves)

10.1410

3108 3008

30393

S/022/61/014/004/007/010
D299/D302

AUTHOR: Bagdoyev, A. G.

TITLE: Axisymmetric self-similitude problem for shock pressure

PERIODICAL: Akademiya nauk Armyanskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, v.14, no.4, 1961, 123-129

TEXT: The penetration is considered of a shock wave into a medium which occupies the lower half-space; the shock wave propagates symmetrically on the surface of the half-space. The x-axis is directed downwards in the half-space. The coordinates $\xi = x/t$ and $\eta = y/t$, are introduced. Euler's equation and the continuity equation for the velocities V_x and V_y , and the pressure P , are

$$\frac{\partial V_x}{\partial \xi} (V_x - \xi) + \frac{\partial V_y}{\partial \eta} (V_y - \eta) + \frac{1}{\rho} \frac{\partial P}{\partial \xi} = 0,$$

Card 1/87

X

30393

Axisymmetric self-similitude ...

S/022/61/014/004/007/010
D299/D302

$$c \frac{dP}{d\xi} + \frac{dv}{d\xi} \rho c^2 + \frac{-c \cos \alpha}{-v \sin \alpha + \xi - c \sin \alpha} \rho c^2 \frac{d\alpha}{d\xi} +$$

$$+ cv \rho c^2 \frac{-\sin \alpha}{-v \sin \alpha + \xi - c \sin \alpha} \frac{1}{\xi} = 0 \quad (5)$$

$$\frac{\eta - \xi \frac{d\eta}{d\xi}}{\sqrt{1 + \left(\frac{d\eta}{d\xi}\right)^2}} = c + v \quad (6)$$

where α is the inclination of the characteristic with respect to the x-axis. From the conditions on the shock front one obtains, to an approximation of second-order quantities P/Bn (B and n are constants), the relation $dv = dP/\rho c$. The assumed smallness of P/Bn holds for pressures of the order of 1000 atmospheres. In general, system (5) - (6) cannot be integrated by simple means. For pres-

Card 3/87

X

Axisymmetric self-similitude ...

30393
S/022/61/014/004/007/010
D299/D302

sure up to 20000 atmospheres, it could be integrated numerically and the problem can be solved by neglecting the influence of the shock wave. With small P/Bn , however, it is sufficient to retain the first two terms of the expansion. Let $P = P_1 + P_2/Bn$, $\eta = \eta_1 + \eta_2/Bn$. A system of equations is obtained; P_1 corresponds to the linear problem, whereby the solution along $A'B'$ (see Fig. 1) is

$$P_1 = \tilde{P}_1 P_a(\xi) \sqrt{\frac{\xi - a_0 \sin \alpha_1}{\xi}} \sqrt{\frac{1}{\xi' - a_0 \sin \alpha_1}}$$

(ξ' corresponds to the boundary point A'). To an approximation of second-order quantities P/Bn , one obtains

$$P_1 = \tilde{P}_1 \sqrt{\frac{\xi - a_0 \sin \alpha_1}{\xi}} \sqrt{\frac{V}{V - a_0 \sin \alpha_1}} +$$

Card 4/8 7

X

Axisymmetric self-similitude ...

3039B
S/022/61/014/004/007/010
D299/D302

$$+ \tilde{P}_1 \sqrt{\frac{\xi - a_0 \sin \alpha_1}{\xi}} \sqrt{\frac{V}{V - a_0 \sin \alpha_1}} \frac{2P'_a(V) - \frac{1}{V} + \frac{1}{V - a_0 \sin \alpha_1}}{2} \xi'_1 \quad (11)$$

The first term of (11) is the solution of the linear problem at the point M. Comparing the solution η in the linear approximation, with the nonlinear additional term η_2/Bn , the conclusion is reached that this term is more than 20% the value of η . In order to determine the pressure at the shock-front, it is necessary to solve Eq. (6). Its solution, with boundary conditions $\xi = \xi'$, $\eta = 0$, is

$$\eta = \frac{\xi' - \xi}{\sqrt{\frac{\xi^2}{a_0^2} - 1}} + \frac{1}{Bn} \eta_2 \quad (14)$$

Card 5/87

X

30393

Axisymmetric self-similitude ...

S/022/61/014/004/007/010
D299/D302

where η_2 is found by series expansion. From Eq. (14) one obtains (by expansion in series) the approximate solution

$$\eta = \frac{v - \xi}{\sqrt{\frac{v^2}{a_0^2} - 1}} + a(\xi) + \xi_1' b(\xi) \quad (15)$$

where a and b are given by expressions. Along the shock front, the formula

$$D = \frac{\eta - \xi \frac{d\eta}{d\xi}}{\sqrt{1 + \left(\frac{d\eta}{d\xi}\right)^2}} = \frac{c + v + a_0}{2} \quad (16)$$

Card 6/87

X

30393

Axisymmetric self-similitude

S/022/61/014/004/007/010
D299/D302

holds, where D is the velocity of the shock wave. From Eqs. (15) and (16) one obtains the equation for $\xi_1(\xi)$ along AB. The solution to this equation is given. Hence one obtains (to an approximation of second-order quantities): $P = P_1 + \frac{1}{Bn} P_2$. Thus the solution at the point M has been obtained. This solution is sufficiently exact for pressures up to 1000 kg/cm². There are 1 figure and 2 references: 1 Soviet-bloc and 1 non-Soviet-bloc (in translation).

ASSOCIATION: Institut matematiki i mekhaniki AN Armyanskoy SSR
(Institute of Mathematics and Mechanics, AS Armenian SSR)

SUBMITTED: December 26, 1960

Card 7/87

X

10 1410 1327

33529

S/022/61/014/005/003/007
D237/D301

AUTHOR: Bagdoyev, A. G.

TITLE: Plane and axially-symmetric pressure problem

PERIODICAL: Akademiya nauk Armyanskoy SSR. Izvestiya. Seriya fizi-
ko-matematicheskikh nauk, v. 14, no. 5, 1961, 79-85

TEXT: A plane problem for the pressure penetration into a com-
pressible ideal fluid is considered. The equation of polytropy for
the fluid is

$$P = B \left[\left(\frac{\rho}{\rho_0} \right)^n - 1 \right] \quad (1) \quad \lambda$$

where P = pressure, ρ = density, B, n = constants. Equations of mo-
tion and continuity are given together with boundary conditions
and velocity of the pressure front is assumed to be supersonic. A
Card 1/3

Plane and axially-symmetric ...

33529

S/022/61/014/005/003/007
D237/D301

shock-wave penetrating the fluid is assumed not to influence the flow behind it, and interaction of rarefaction waves moving from the boundary with the shock-wave front. Characteristic surfaces of first kind overcoming the shock-wave front are taken as rarefaction waves, and the equation of the characteristic is $y = y(x, t)$. The solution of the linear problem corresponding to the wave front is sought in the form

$$P = P_1 + \frac{1}{Bn} P_2, \quad y = y_1 + \frac{1}{Bn} y_2, \quad \alpha = \alpha_1 + \frac{1}{Bn} \alpha_2,$$

$$c = a_0 \left(1 + \frac{1}{Bn} P_1 \right), \quad dV = \frac{dP}{\rho c} \quad (7)$$

where $\frac{P}{Bn}$ is small, and is obtained on neglecting infinitesimals of

Card 2/3

Plane and axially-symmetric ...

33529
S/022/61/014/005/003/007
D237/D301

an order higher than the first, while the solution corresponding to any other characteristic is obtained by suitable adjustment of boundary conditions: y_2 is found by equating the second order terms. The law of motion of the shock-wave is found by expanding a characteristic equation in powers of small parameters t_0' and λ' and neglecting higher orders, while the pressure on the shock-wave is found by considering second order terms in the conditions of compatibility on the characteristic. In the case of axial symmetry the solution of the linear problem contains the factor $1/\sqrt{x}$ and calculations are much more involved. There are 1 figure and 3 Soviet-bloc references.

ASSOCIATION: Institut matematiki i mekhaniki AN Armyanskoy SSR
(Institute of Mathematics and Mechanics AS Armenian SSR)

SUBMITTED: January 4, 1961

Card 3/3

~~BAGDOYEV, A.G.~~

Pressure measurements for large moments of time. Izv. AN Arm.
SSR. Ser.fiz.-mat. nauk 14 no.6:131-133 '61. (MIRA 15:1)

1. Institut matematiki i mekhaniki AN Armyanskoy SSR.
(Fluid dynamics)

BAGDOYEV, A.G.

Pressure propagation in a two-phase fluid [with summary in English]. Vest. Mosk. un. Ser. 1: Mat., mekh. 16 no.3:77-80 My-Je '61. (MIRA 14:7)

1. Institut matematiki i mekhaniki AN Armyanskoy SSR. (Hydrodynamics)

BAGDOYEV, A.G.

Penetration of pressure into an ideal compressible fluid. Dokl.
AN Arm SSR 32 no.1:23-29 '61. (MIRA 14:3)

1. Institut matematiki i mekhanika AN Armyanskoy SSR. Predstavleno
chlenom-korrespondentom AN Armyanskoy SSR S.A. Ambartsumyanom.
(Pressure)

BAGDOYEV, A.G.

Asymptotic laws for impact pressure. Dokl. An ARM SSR 32 no.2:65-67
'61. (MIRA 14:3)

1. Institut matematiki i mekhaniki AN Armyanskoy SSR. Predstavleno
akademikom AM ArmSSR A.G. Nazarovym.
(Pressure)

S/124/62/000/003/012/052
D237/D301

AUTHOR: Bagdoyev, A.G.

TITLE: The possibility of replacing a shock transition by a smooth one

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 3, 1962, 30,
abstract 3B151 (Dokl. AN ArmSSR, 1961, 33, no. 1,3-5)

TEXT: The validity of replacing a shock transition by a smooth one for a plane, unstable, gas flow (although the author calls it spatial), is investigated. It is assumed that the smooth flow is a potential one. On this assumption it is shown that the pressure with the shock-wave taken into account, coincides with that of a smooth flow with an accuracy up to the 2nd order inclusive. [Abstractor's note: Complete translation].

Card 1/1

✓

21404

24,5300

1043, 1055, 1164

S/020/61/137/004/009/031
B104/B206

AUTHORS: Bagdoyev, A. G. and Nersisyan, E. M.

TITLE: The penetration of an arbitrary pressure into a compressible liquid in the isentropic case

PERIODICAL: Doklady Akademii nauk SSSR, v. 137, no. 4, 1961, 807-809

TEXT: The authors assume that in a certain point O of the compressible liquid a pressure develops which spreads in an arbitrary symmetry to O. Starting from the polytropic equation of state, it is established that for a pressure in the range of 1000 kg/cm^2 the motion of the liquid can be assumed as being isentropic. Axial symmetry is assumed and the coordinate system is selected in such a way that OX lies on the surface and OY points toward the depth. In the points $x = x'$ on the surface, elementary waves develop at the time $t = t'$, which are called Riemann waves:

$$(x-x'-u)^2 + (y-v)^2 = a_1^2(x', t')(t-t')^2 \quad (3).$$

u and v are here the velocity components of the particles on the surface in the directions of the

Card 1/4

21484

S/020/61/137/004/009/031
B104/B206

The penetration of an arbitrary K.

coordinates, $a_1(x', t')$ the sound velocity in the point $x = x'$ for $t = t'$, whereby $a_1(x', t') = a_0 \left[1 + \frac{n-1}{Bn} P_1(x', t') \right]$ (4). B is a slightly varying function of the entropy and a_0 the sound velocity in the liquid at rest. The equation of the surface levels is found as the envelope of (3) for $a_1(x', t') = \text{const}$

$$(x - x')^2 + y^2 = a_1^2(x', t')(t - t')^2, \quad (5)$$

$$(x - x') \frac{\partial x'}{\partial t'} = a_1^2(x', t')(t - t'),$$

u and v being neglected. For the determination of the shock wave, the authors use the approximation formula

$$(A) \quad D = \frac{(n-3)a_0 + (n+1)a_1(x', t')}{2(n-1)} = \frac{\partial y / \partial t}{\sqrt{1 + (\partial y / \partial x)^2}},$$

from which the equation $y = f(x, t)$ of the shock wave is found by substituting x' and t' in the functions of x , y , and t from (5) for the boundary condition $y|_{x=R(t)} = 0$. After determining the following values of y for a given t and x , x' and t' can be defined from (5) and the pressure

Card 2/4

21404

S/020/61/137/004/009/031

B104/B206

The penetration of an arbitrary...

of the shock wave can then be determined from $P = P_1(x', t')$. The following calculation results are given in Table 1:

$t = 0.0155$ sec,	$R'(t) = 3217.7$ m/sec			
x	91.72	76.98	65.21	54.50
y	0	6.72	9.35	13.53
P_1 , kg/cm ²	106.71	168.91	199.70	228.56

For the boundary pressure the approximated true pressure for the explosion in the atmosphere:

$$(B) \quad P_1(x', t') = 1,2048 \left[\left(\frac{R'(t')}{340} \right)^2 - 1 \right] f \left[\frac{x'}{R(t')} \right],$$

$$f \left[\frac{x'}{R(t')} \right] = 8,729 - 7,481 \frac{x'}{R(t')} - 7,284 \sqrt{\left[1,153 - \frac{x'}{R(t')} \right]^2 - 0,022241}.$$

is taken. From the representation $\eta = \frac{\xi' - \xi}{\sqrt{\xi'^2/a_1^2(\xi') - 1}}$, (6)

for the surface level, which follows from (5) and where $\xi = x/t$, $\eta = y/t$, $\xi' = x'/t'$ holds, it ensues that (6) agrees with the surface levels of simple waves. For linear boundary conditions $a_1(\xi') = A \xi'$,

Card 3/4

The penetration of an arbitrary...

21484

S/020/61/137/004/009/031
B104/B206

$$\frac{a(\xi, \eta)}{\lambda} = V \left(\frac{\xi}{V} \right)^m - \frac{1}{2\lambda m} \frac{n-3}{n-1} a_0 \sin \varphi \left[\left(\frac{\xi}{V} \right)^m - 1 \right], \quad (7)$$

is finally obtained for the shock wave, with $m = -\frac{n+1}{n-1} \frac{\sin^2 \varphi}{2} + 1$. For the values $a_0/V = 1/6$ and $\lambda = 1/3$, the following values were obtained with (7):

ξ/V	0.95	0.9	0.8	0.7	0.4
$P, \text{ kg/cm}^2$	6863	6610	6083	5511	3400

There are 2 Soviet-bloc references.

ASSOCIATION: Institut matematiki i mekhaniki Akademii nauk ArmSSR
(Institute of Mathematics and Mechanics of the Academy of Sciences Armyanskaya SSR)

PRESENTED: November 5, 1960, by L. I. Sedov, Academician

SUBMITTED: February 24, 1960

Card 4/4

S/179/62/000/002/007/012
E031/E435

10.1400

AUTHORS: Bagdoyev, A.G., Nersisyan, E.M. (Yerevan)

TITLE: The axisymmetric isentropic problem of the
penetration of pressure into an ideal compressible
fluid

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye
tekhnicheskikh nauk. Mekhanika i mashinostroyeniye,
no.2, 1962, 48-56

TEXT: The validity of replacing a shock transient by one without
a shock was previously investigated for a one-dimensional unsteady
and a three-dimensional steady flow. A proof is given in this
paper of the validity for a three-dimensional unsteady flow.
In considering the penetration of pressure a solution of the
equations of motion and continuity is sought in which the
characteristics are straight lines. In the linear formulation
a simplified solution is obtained and it is shown that for an
arbitrary pressure the method of superposition of Riemann waves
is valid only if the velocity is nearly constant. An expression
is derived for the pressure on the wave front in the linear
Card 1/2

✓B

The axisymmetric isentropic ...

S/179/62/000/002/007/012
E031/E435

formulation. The self simulating axisymmetric problem is considered. An approximate expression for the pressure is derived. Finally the plane problem of the penetration of an arbitrary pressure into the half-space occupied by a compressible fluid is discussed. An approximate expression is given for the pressure on a characteristic. There are 4 figures and 1 table.

ASSOCIATION: Institut matematiki i mekhaniki AN ArmSSR
(Institute of Mathematics and Mechanics AS ArmSSR)

SUBMITTED: June 5, 1961

Card 2/2

10 1200

S/022/62/015/003/007/008
D234/D308

AUTHOR: Bagdoyev, A.G.

TITLE: An improvement of the law of pressure distribution

PERIODICAL: Akademiya nauk Armyanskoy SSR. Izvestiya, v.15. no.3, 1962, 127

TEXT: Let the main pressure P_1 move with a velocity V on the surface of a compressible liquid occupying the lower half-space. Let $V \ll a_0$, a_0 the velocity of sound in the undisturbed liquid. The pressure at the point of intersection of the shock wave with the surface is determined by assuming the basic flow to be one-dimensional and the pressure in the shock wave to be equal to P_1 . Taking into account the spherical form of the waves, and assuming V/a_0 to be small, the pressure on the shock wave moving in the liquid is equal to $\tilde{P}_1 = (3/2)(\gamma+1) \rho_0 a_0^2 (V/a_0)^4$, ρ_0 being the initial density of the liquid and γ the polytrope exponent. It

√B

Card 1/2

S/022/62/015/004/002/003
1028/1228

AUTHOR: Bagdoyev, A. G.

TITLE: Determination of the law of distribution of a pressure propagating at subsonic velocity

PERIODICAL: Akademiya nauk Armyanskoi SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk.
v. 15, no. 4, 1962, 65-69

TEXT: The penetration of the pressure in a fluid is examined under the assumption that the velocity of propagation of the pressure front on the surface is subsonic $R(t) = V_0 < a_0 V$. The boundary condition for the pressure is

$$P(x, 0, t) = \begin{cases} P_1 & x < V_0 t \\ 0 & x > V_0 t \end{cases} \quad (1)$$

A differential equation is established for the velocity potential φ , and a solution sought in the form

$$\varphi = \gamma \varphi_0 + \gamma^2 \varphi_1 + \dots \quad (8)$$

where $\gamma \varphi_0$ is the linear solution. The relationships at the shock wave are obtained by passing to the limit $r/t \rightarrow a$ (a = sound velocity), and the pressure at the front is determined from them. It is found that the pressure at the front is different from zero.

Card 1/2

S/022/62/015/006/002/006
D218/D308

AUTHOR:

Bagdoyev, A.G.

TITLE:

Interactions of perturbations with the shock front in the problem of penetration of pressure into a liquid

PERIODICAL:

Akademiya nauk Armyanskoy SSR. Izvestiya, v. 15, no. 6, 1962, 51 - 60

TEXT:

This paper is concerned with the propagation of self-similar pressure waves moving with a constant ultrasonic velocity V_0 over the surface of a compressible liquid and penetrating into the liquid. The problem involves the solution of the set of differential equations

$$\frac{\partial u}{\partial t} + u \frac{\partial u}{\partial x} + v \frac{\partial u}{\partial y} = - \frac{1}{\rho} \frac{\partial P}{\partial x},$$

$$\frac{\partial v}{\partial t} + u \frac{\partial v}{\partial x} + v \frac{\partial v}{\partial y} = - \frac{1}{\rho} \frac{\partial P}{\partial y},$$

Card 1/3

Interactions of perturbations ... S/022/62/015/006/002/006
D218/D308

$$\frac{dP}{dt} + \rho a^2 \left(\frac{\partial u}{\partial x} + \frac{\partial v}{\partial y} \right) = 0. \quad (1)$$

subject to the boundary conditions

$$P(x, 0, t) = \begin{cases} P_1 - \gamma f_1\left(\frac{x}{t}\right) & x < V_0 t \\ 0 & x > V_0 t \end{cases} \quad (2)$$

where t is the time, u, v are the velocity components along the x and y axes, both of which lie in the plane of the undisturbed liquid, P is the pressure, ρ is the density, a is the velocity of sound in the liquid, P_1, V_0 are constants, and γ is a small parameter. These equations are solved with the aid of the perturbation theory. The final solution, obtained after linearization and transformation to dimensionless coordinates,

Card 2/3

Interactions of perturbations ...

S/022/62/015/006/002/006
D218/D308

is in the form of a series incorporating the various perturbations reflected from the shock wave and the free surface. Explicit expressions are obtained which may be used to compute the coefficient of reflection from the shock wave and the functions describing the propagation. There is 1 figure and 1 table.

ASSOCIATION:

Institut matematiki i mekhaniki, AN Armyanskoy SSR. (Institute of Mathematics and Mechanics of the AS, Armenian SSR)

SUBMITTED:

May 12, 1962

Card 3/3

L 12975-63

EPR/EPA(b)/EWT(1)/BDS AFFTC/ASD Ps-4/Pd-4 WW

ACCESSION NR: AP3000084

S/0022/63/016/002/0055/0057

AUTHOR: Bagdoyev, A. G.

63
62

TITLE: Penetration of compression wave at supersonic speeds

SOURCE: AN ArmSSR. Izv. Seriya fiziko-matem. nauk, v. 16, no. 2, 1963, 55-57

TOPIC TAGS: shock wave, compressible fluid, speed of sound

ABSTRACT: The propagation of a shock wave from its point of origin above the surface of a semi-infinite, compressible fluid and the subsequent penetration into the fluid were studied. For the case of the wave front propagating at supersonic speeds, the method of characteristics was used to describe the resulting disturbance patterns, and an expression was obtained for the magnitude of pressure generated by the wave front. This pressure has a non-zero value everywhere except at two points of singularities where the wave front intersects the fluid surface. Orig. art. has: 11 equations and 2 figures.

Cord 1/2

L 17975-63

ACCESSION NR: AP3000084

ASSOCIATION: Institut matematiki i mekhaniki AN Armyanskoy SSR (Institute of
Mathematics and Mechanics, Academy of Sciences, Armenian SSR)

SUBMITTED: 18Jul62

DATE ACQ: 12Jun63

ENCL: 00

SUB CODE: AS,MM

NO REF SOV: 001

OTHER: 000

Card 2/2

I. 14273-63 EPA(b)/EWT(1)/BDS AFFTC/ASD R3-4

ACCESSION NR: AP3000970

S/0622/63/016/003/0091/0093

57

AUTHOR: Bagdoyev, A.G.

TITLE: Penetration of compression wave in nonhomogeneous compressible fluid

SOURCE: AN ArmSSR. Izv. Seriya fiziko-matematicheskikh nauk, v. 16, no.3, 1963, 91-93

TOPIC TAGS: compression wave, sound speed, compressible fluid

ABSTRACT: An analysis was made of a compression wave² travelling at a constant speed v over a fluid surface and penetrating into the fluid where the speed of sound c is assumed to be an increasing function of depth. The resulting wave front consists of the fundamental branch in the domain v greater than c and a reflected, caustic curve when v is less than c . An expression for the resulting pressure is given, applying to the domain where v is less than c . Orig. art. has: 8 equations and 1 figure.

ASSOCIATION: Institut matematiki i mekhaniki AN Armyanskoy SSR (Institute of Mathematics and Mechanics, Academy of Sciences, Armenian SSR)

SUBMITTED: 18Jul62

DATE ACQ: 01Jul63

ENCL: 00

SUB CODE: PH, AS

NO REF SOV: 002

OTHER: 000

Card 1/1

BAGDOYEV, A.G. (Yerevan)

"The problem of fluid motion in a half-space caused by the pressure on the surface"

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 January - 5 February 1964

BAGDOYEV, A.G.

Correctness of the simple wave-type solution. Izv. AN Arm.
SSR.Ser.fiz.-mat.nauk 17 no.1:75-77 '64. (MIRA 17:3)

1. Institut matematiki i mekhaniki AN Armyanskoy SSR.

ACCESSION NR: AP4042537

S/0022/64/017/003/0071/0080

AUTHOR: Bagdoyev, A. G.

TITLE: On the law of motion of a shock wave in a liquid

SOURCE: AN ArmSSR, Izvestiya. Seriya fiziko-matematicheskikh nauk, v. 17, no. 3, 1964, 71-80

TOPIC TAGS: pressure distribution, pressure jump, shock front propagation, shock front structure, shock wave analysis, characteristic function

ABSTRACT: The author derives equations for the shock wave accompanying the axially-symmetrical penetration of a pressure $P_A(t)$ into a semi-infinite liquid with a polytrope equation $P = B[(\rho/\rho_0)^n - 1]$, where P = pressure, ρ = density, B , n = constants. The method of characteristics is used, with the characteristics of the linear

1/2

ACCESSION NR: AP4042537

problem replaced by the corrected characteristics. The conditions under which a discontinuity is formed behind the shock front are determined. It is shown that in the linear approximation the effect of the shock is equivalent to that of a concentrated force. A solution is also obtained in the vicinity of the point a/V (a = initial velocity of sound in the liquid, V = velocity of wave front). It is shown that the pressure has an exponential order of smallness in the diffraction region and that in the vicinity of the point a/V the pressure has a smaller value of the order of $(P_1/Bn)^{4/3}$. Orig. art. has: 27 formulas.

ASSOCIATION: Institut matematiki i mekhaniki AN ArmSSR (Institute of Mathematics and Mechanics, AN ArmSSR)

SUBMITTED: 10Dec63

ENCL: 00

SUB CODE: ME

NR REF SOV: 002

OTHER: 001

2/2

ACCESSION NR: AP4044086

/0022/64/017/004/0091/0096

AUTHOR: Bagdoyev, A. G.

TITLE: Investigation of the pressure distribution on a shock wave

SOURCE: AN ArmSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk,
v. 17, no. 4, 1964, 91-96

TOPIC TAGS: aerodynamic theory, compressible fluid, shock wave
propagation, pressure distribution, ultrasonic wave propagation

ABSTRACT: The axially-symmetrical problem of penetration of pressure in a compressible fluid is considered. The pressure behind the front on the surface is regarded to be constant, and the front moves with supersonic velocity. Using the method of characteristics, a solution is first obtained which permits an estimate of the order of magnitude, but must be refined to account for the fact that the characteristics are not one-dimensional. The final result yields an

Card 1/2

L 12952-65
ACCESSION NR: AP4044086

equation for the line of the shock front, but the boundary separating the short-wave region from the region of continuous variation of the pressure remains arbitrary. Orig. art. has: 20 formulas.

ASSOCIATION: Institut matematiki i mekhaniki AN Armyanskoy SSR
(Institute of Mathematics and Mechanics, AN ArmSSR)

SUBMITTED: 10Dec63

ENCL: 00

SUB CODE: ME, GP

NR REF SOV: 003

OTHER: 001

Cord 2/2

L 16560-65 EWT(1)/EWP(m)/PCS(k)/EWA(h)
ASD(f)-2/AFETR

Pd-1/Pi-4 ALDC(a)/SSD(b)/

ACCESSION NR: AP4049200

S/0022/64/017/005/0061/0071

AUTHOR: Bagdoyev, A. G.

TITLE: Determination of the pressure on a shock wave in a liquid

SOURCE: AN ArmSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk,
v. 17, no. 5, 1964, 61-71

TOPIC TAGS: shock front propagation, shock wave analysis, pressure
distribution, compressible fluid

ABSTRACT: The author uses earlier results (Izv. AN ArmSSR, ser.
fiz. mat. nauk v. 15, no. 4, 1962) and the method of G. B. Witham
(Comm. Pure and Appl. Math, v. VI, 1953) to determine the penetra-
tion of pressure in a compressible liquid with a polytropic equation
of state, and then obtains in second approximation the pressure on
the front of an axially symmetrical shock wave in the liquid, the
velocity components, and the density. The results can be extended

Card 1/2

L 16560-65

ACCESSION NR: AP4049200

to include pressure variations along the coordinate and an inhomogeneous liquid. The relative accuracies of the components are briefly discussed. Orig. art. has: 1 figure and 38 formulas.

ASSOCIATION: Institut matematiki i mekhaniki AN Armyanskoy SSR
(Institute of Mathematics and Mechanics, AN ArmSSR)

SUBMITTED: 29Nov63

ENCL: 00

SUB CODE: ME

NR REF SOV: 006

OTHER: 001

Card 2/2

L 2001-66 EWT(d)/EWT(1)/EWP(w)/EWP(m)/EWT(m)/EWA(d)/FCS(k)/EWA(h)/EWA(c) WW/EM
ACCESSION NR: AP5018624 UR/0022/65/018/003/0098/0117

AUTHOR: Bagdoyev, A. G.

TITLE: Solution of the problem concerning pressure applied to the boundary of a
liquid half-space

SOURCE: AN ArmSSR, Izvestiya, Seriya fiziko-matematicheskikh nauk, v. 18, no. 3,
1965, 98-117

TOPIC TAGS: pressure distribution, detonation, detonation wave, shock wave pro-
pagation, supersonic shock wave

ABSTRACT: The author deals with the propagation of the pressure together with the
shock wave produced by detonation on the surface of a liquid. The problem is first
solved in a linear approximation, after which corrections are introduced and it is
shown that the corrected solution coincides with the exact solution of the gasdyna-
mics equations. To determine the pressure in the second approximation, the unknown
functions and independent variables are expanded in terms of a small parameter and
integrated in standard fashion. The results are then extended to an explosion pro-
Card 1/2

L 2001-66

ACCESSION NR: AP5018624

duced at some height above the surface of the liquid. The possibility of the shock wave propagating ahead of the sound line in the higher approximation is briefly discussed. It is shown that the results can be applied to other nonstationary problems, such as nonstationary diffraction or flow around a rounded wing, provided the absence of supersonic shock wave propagation can be verified. Orig. art. has: 4 figures and 41 formulas,

ASSOCIATION: Institut matematiki i mekhaniki AN Armyanskoy SSR (Institute of Mathematics and Mechanics, AN ArmSSR)

SUBMITTED: 09Oct64

ENCL: 00

SUB CODE: ME

NR REF SOV: 007

OTHER: 004

Card 2/2 *RP*

L 54001-65

EWP(m)/EWT(l)/EWA(d)/EPR/FCS(k)/EWA(h)/EWA(c) Pd-1/P1-4 WH

ACCESSION NR: AP5011126

UR/0252/65/040/003/0129/0136

AUTHOR: Bagdoyev, A. G.

34
33
B

TITLE: Solution of problem of ideal fluid motion in half-space under action of a shock wave

SOURCE: AN ArmSSR. Doklady, v. 40, no. 3, 1965, 129-136

TOPIC TAGS: shock wave, inviscid flow, supersonic flow, pressure distribution, method of characteristic

ABSTRACT: At the point O on the boundary of a fluid half-space a pressure wave is created which moves along a shock front (see Fig. 1 on the Enclosure). It is assumed that the pressure at the liquid surface is constant. An analysis is made to determine the shock front B'B for the case $V > a_0$, where a_0 is the initial sound speed and V is the speed of the shock front along the fluid boundary. The solution of the linear problem in the vicinity of the points BB' are discussed in detail. The points BB' are connected by the elliptic curve BCC'B' and the hyperbolas ABC, A'P'C'. It is shown that the second approximation solution

Card 1/4

I 54001-65

ACCESSION NR: AF5011126

$$\frac{P}{P_1} = f(\theta) \frac{\sqrt{y_1}}{\sqrt{\frac{r_1}{a_0}}},$$

$$\beta(r_1) = \frac{1}{a_0} \frac{h+1}{2} \frac{P_1}{Bn} \sqrt{r_1} \sqrt{a_0} 2f(\theta), \quad Bn = \rho_0 a_0^2,$$

$$t = \frac{r_1}{a_0} - \beta(r_1) \sqrt{y_1} + y_1,$$

in the vicinity of BB' corresponds exactly to the gas dynamic solution

$$r_1 = a_0 t \left(1 + \frac{n+1}{2} \frac{P_1}{Bn} \delta \right), \quad \frac{P}{P_1} = \mu,$$

$$\delta = 2\mu + C\mu^2.$$

It is also shown that the above problem corresponds to the conical flow obtained at the edge of triangular and right angle air foils at an angle of attack α' . This means a two-dimensional short wave solution is valid to a distance from B not exceeding

Cord 2/4

L 54001-65
ACCESSION NR: AP5014126

$$\frac{1}{\gamma^2}, \gamma = \frac{(v_r)_B}{a_0}, 0 - \theta_0 > \sqrt{\gamma}, \cos \theta_0 = \frac{1}{\operatorname{tg} \beta \sqrt{\frac{V^2}{a_0^2} - 1}}, (v_r)_B = \frac{Va'}{\sin \theta_0}.$$

A brief description is given of the pressure field arising from an explosion above the water surface. Orig. art. has: 24 equations and 2 figures.

ASSOCIATION: Institut matematiki i mekhaniki, Akademii nauk Armyanskoy SSR
(Institute of Mathematics and Mechanics, Academy of Sciences, Armenian SSR)

SUBMITTED: 00

ENCL: 01

SUB CODE: ME

NO REF SOV: 006

OTHER: 004

Cord 3/4

BAGDUYEV, G. B.

AUTHORS:

Amirkhanov, Kh. I., Member of the AN ^{20-6-8/47} Azerbaidzhan SSR
Bagduyev, G. B., Kazhlayev, M. A.

TITLE:

The Thermal Conductivity of Tellurium (Teploprovodnost' tellura).

PERIODICAL:

Doklady AN SSSR, 1957, Vol. 117, Nr 6, pp. 953 - 955 (USSR)

ABSTRACT:

The present paper gives the results of investigations of the temperature dependence of the thermal conductivity λ of pure tellurium in the interval of from 10 to 500°C. Object of the investigations were finely crystalline samples produced in the form of tablets by cold pressing under a pressure of 4000 kg/cm² and by 6 hours hot pressing at a temperature of 400°C under a pressure of 360 kg/cm². The thermal conductivity was measured by the compensation method with the use of a vacuum for avoiding the oxidation of the sample. Special investigations of the course of temperature of the heat capacity were additionally made by an adiabatic microcalorimeter. The existence of charge carriers of two signs in tellurium further complicates the already complicated total image of thermal conductivity, which is also indicated by the experimental data found here. The curves given here illustrate the course of temperature of the different components of the thermal conductivity of tellurium. One of these curves illustrates the temperature dependence of the phononic part of thermal con-

Card 1/2

The Thermal Conductivity of Tellurium.

20-6-8/47

ductivity calculated according to Eucken (Eyken)'s law. Then an expression for the electron-hole-thermal conductivity is written down. The results of these tests indicate the following: The thermal conductivity in tellurium is in the entire domain of the thermal conductivity proper (beside the quasielastic vibrations of the lattice and by the thermal diffusion of the charge carriers) also guaranteed by the thermal conductivity due to diffusion and recombination of the electron-hole pairs. On passage through the melting temperature a dissociation of an immense amount of atoms takes place in tellurium, whereby the amount of free charge carriers is highly increased. The here-described tests with a temperature-melt comprise a small interval (460-490°C) between the two extreme states (passing continuously one into the other) of the tellurium melt, namely between the semiconductor-state immediately after melting (452°C) and the metallic state (550°C). The tests discussed here are continued in another temperature interval. There are 2 figures, and 9 references, 6 of which are Slavic,

SUBMITTED: July 16, 1957

AVAILABLE: Library of Congress

Card 2/2

BAGDUYEV, G. B. Cand Phys-Math Sci -- (diss) "Study of the heat conductivity of tellurium and tellurium-selenium solutions." Makhachkala, 1958. 14 pp
(Len Order of Lenin State Univ im A. A. Zhdanov), 150 copies (KL, 52-58, 97)

24(2), 24(8)

AUTHORS:

Amirkhanov, Kh. I., Academician, AS SOV/20-124-3-16/67
Azerbaydzhanskaya SSR, Bagduyev, G. B., Kazhlayev, M. A.

TITLE:

The Anisotropy of Thermal Conductivity in a Single Crystal of Tellurium (Anizotropiya teploprovodnosti v monokristalle tellura)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 3, pp 554-556 (USSR)

ABSTRACT:

The present paper gives the results obtained by measurements of the thermal conductivity on a tellurium single crystal bred in a furnace by slow cooling from 750° K to room temperature. The tellurium casting thus produced (length 6 cm, diameter 2 cm) was a massive single crystal without any fine-crystalline inclusions. The single crystal was split along its parallel surfaces and formed reflecting faces at the points of fracture. From this single crystal samples were cut out parallel and vertical to the cleavage face for the purpose of measuring thermal conductivity. Also electric conductivity and the Hall effect were measured. The method of measuring thermal conductivity has already been described in one of the authors' previous papers (Ref 1). A diagram shows the temperature dependence of thermal conductivity and a second diagram shows the

Card 1/3

The Anisotropy of Thermal Conductivity in a Single
Crystal of Tellurium

SOV/20-124-3-16/67

dependence of the electric conductivity of the samples within the temperature interval of from 100 to 640° K. The curves of the first diagram show marked anisotropy of thermal conductivity in the direction of the crystallographic axes of the single crystal, which becomes weaker with increasing temperature. Numerical data concerning this anisotropy are given. The anisotropy of thermal conductivity in a tellurium single crystal is probably connected with the fact that in a heat flow along the cleft, thermal resistance is essentially due to phonon-phonon scattering. However, in the case of a heat flow that is vertical to the cleavage plane, there is, besides phonon-phonon scattering, also a considerable amount of scattering of phonons on the crystal layers, which act as additional scattering centers. At low temperatures of about up to room temperature, that part of thermal conductivity which is due to electrons may be neglected as being infinitely small, and the total thermal conductivity in this temperature interval may essentially be ascribed to the thermal diffusion of phonons. Next, expressions are given (separately for low and high temperatures) for the dependence of the thermal

Card 2/3

The Anisotropy of Thermal Conductivity in a Single
Crystal of Tellurium

SOV/20-124-3-16/67

conductivity coefficient of a tellurium single crystal parallel and vertical to the crystallographic axes. The lesser degree of decrease of thermal conductivity in a tellurium single crystal at high temperatures can, as in the case of polycrystalline samples, be ascribed to the participation of current carriers in the transfer of thermal energy. Various indications tend to show a diffusion and recombination of electron-hole pairs. There are 3 figures and 3 Soviet references.

ASSOCIATION: Dagestanskiy filial Akademii nauk SSSR (Dagestan Branch of the Academy of Sciences, USSR)

SUBMITTED: August 28, 1958

Card 3/3

24.5300

S/058/62/³⁹¹²⁹000/006/069/136
A061/A101

AUTHORS: Bagduyev, G. B., Valiyev, A. A., Kazhlayev, M. A., Kamilov, I. K.

TITLE: The heat conductivity of lead telluride

PERIODICAL: Referativnyy zhurnal, Fizika, no. 6, 1962, 17, abstract 6E143
("Uch. zap. Dagestansk. un-t", 1961, v. 7, no. 1, 107 - 111)

TEXT: The heat conductivity (λ) of PbTe has been measured in the temperature range of 90 - 600°K. A plane stationary method was applied and the measurement accuracy was 4 - 6%. Up to 360°K, $\lambda \sim 1/T$. At higher temperatures the dependence was weaker, which is explained by the influence of the electron contribution to λ . At temperatures higher than 200°K, the measurement results diverge from those of Ye. D. Devyatkov (RZhFiz, 1957, no. 11, 27619), which can be explained by the presence, in the experiments of the latter, of neglected radiation losses from the lateral sample surfaces. ✓

L. Filippov

[Abstracter's note: Complete translation]

Card 1/1

L 0002-00 EWI(D)/ENP(D)/ETI LJP(D) JD

ACC NR: AP6024495

SOURCE CODE: UR/0181/66/008/007/2234/2237

AUTHOR: Bagduyev, G. B.; Abakarov, S. A.

ORG: Dagestan State Pedagogical Institute im. G. Tsadasa, Makhachkala (Dagestanskiy gosudarstvennyy pedagogicheskiy institut)

TITLE: Electric properties of tellurium with iodine impurities

SOURCE: Fizika tverdogo tela, v. 8, no. 7, 1966, 2234-2237

TOPIC TAGS: tellurium, electric conductivity, Hall constant, impurity conductivity, semiconductor impurity

ABSTRACT: In view of the scanty published information on the properties of tellurium with impurities, the authors have investigated the influence of a large quantity of iodine on the electric conductivity (σ) and on the Hall constant (R) of tellurium over a wide range of temperatures, using a large number of samples from different sources. In the case of iodine impurities amounting to $< 0.02\%$, the results obtained for R are in agreement with the published data. The intrinsic conductivity of pure samples begins at a temperature below 220K, and the energy gap amounts to 0.33 ev. In the case of strongly doped samples, the intrinsic conductivity begins at temperatures above 330K and the gap increases with increasing iodine content. The results are similar to those obtained elsewhere for selenium. The author thank Kh. I.

Card 1/2

ACC NR: AP6024495

Amirkhanov for interest and R. I. Bashirov for help with the work. Orig. art. has:
2 figures and 2 tables

SUB CODE: 20/ SUBM DATE: 01Nov65/ ORIG REF: 009/ OTH REF: 008

Card 2/2 *egb*

BAGDY A.

✓ 3572. Effect of thrombin on the polysaccharide of fibrinogen.
A. Bagdy and I. Szára *Acta physiol. Acad. Sci. hung.*, 1955, 7,
179-181. When in the course of the clotting of blood thrombin
acts on fibrinogen hexoses are split off the fibrinogen. The splitting
precedes clot formation. When fibrinogen is split by thrombin at
pH 5.1 no gel formation takes place but the hexose content of fibri-
nogen decreases. A polysaccharide prep. of 70% purity was not
split by thrombin. It is concluded that the removal of hexoses
from fibrinogen is linked to the formation of the fibrinopeptide.
(Hungarian)

A. B. L. BEZNAR.

med 2

BAGDY, D. 1949

(Physiologisches und Allgemeines Pathologisches Inst. U. of Debrecen)

"Cortin-Like" Action of Ouabain."

Naunyn-Schmiedeberg's Arch. fur Experimentelle Path und Pharmacol, Berlin, 1949 207/1
-2 (29-38)

Abst: Exc. Med. 11, Vol. 111, No. 6, p. 803

BAGDY, D. 1951

(Biochem. Inst. U. of Budapest)

"Shock and ATP."

Acta Physiol (Budapest), 1951 2/1 suppl (26)
No abst. in Exc. Med.

BAHDY, D.; GERENDAS, M.; WINTER, L.; BENEDEK, T.

Application of bovine foam and of a mixture of thrombin and fibrin powders as hemostatic agents. Acta physiol. hung. 2 no.3-4:493-504 1951.
(CML 22:1)

1. Of the Institute of Pharmaceutical Industrial Research, Budapest, and of the First Surgical Clinic of Budapest University.

BAGDY, D.; AFRA, D.; GERENDAS, M.

Utilization of bovine plasma fibrin products. III. Use of fibrin film in animal experiments for trachea defects. Kiserlates Orvostud. 3 no. 5:373-378 1951. (CIML 21:3)

1. Doctors. 2. Third Department of Drug Industry Research Institute and Institute of Histology and Embryology of Budapest Medical University.

BAGDY, D.

BAGDY, D.; GERENDAS, M.; WINTER, L.; REMEDIK, T.; MARTON, G.

Utilization of the products of fibrin made from bovine plasma; fibrin powder as a thrombin vehicle in experimental hemostasis. Orv. hetil., Budap. 92 no.30:953-956 29 July 1951. (CIML 20:11)

1. Doctors. 2. Third Department (Head -- Dr. Mihaly Gerendas), Pharmaceutical Industry Research Institute; First Surgical Clinic (Director -- Prof. Gyula Sebesteny), Budapest Medical University.

KOVACH, A.G.; BAGDY, D.; BALAZS, R.; ANTONI, F.; GERGELY, J.; MENYHART, J.; IRANYI, M.; KOVACH, F.

Traumatic shock and adenosine triphosphate. Acta physiol. hung.
3 no.2:330-344 1952. (CML 24:3)

1. Of the Institute of Biochemistry of Budapest University.

SZILAGYI, T.:BAGDY, D.:JAVOR, T.

The specificity of fibrinogen of mammals. Kiserletes orvostud 4 no.
4:262-267 Aug 1952. (CML 23:5)

1. Doctor. 2. Pathophysiology Institute of Debrecen Medical University and Third Department of Research Institute of Pharmaceutics Industry.

GROSZ, Z.; BAGDY, D.; BOLONI, E.

Cystine in ophthalmic therapy. Orv. hetil. 93 no. 26:762-763 29
June 1952. (CLML 23:3)

1. Doctors. 2. People's Army Sanitation Service and Pharmaceutical
Industry Research Institute.

WINTER, L.; BENEDEK, T.; BAGDY, D.

The utilization of fibrin products from ox plasma. IV. The application of hemostatic fibrin products in surgical practice. Orv. hetil. 93 no. 50:1427-1431 14 Dec 1952.
(GLML 24:1)

1. Doctors. 2. First Surgical Clinic (Director -- Prof. Dr. Gyula Sebesteny) Budapest Medical University and Department of Biochemistry, Research Institute of the Pharmaceutical Institute (Director and Head of Department -- Dr. Mihaly Gerendas).

BAGDY, D.

Szara, I.; Bagdy, D.

"Polysaccharide of Fibrinogens and Fibrins'." p. 23 (Acta Physiologica, Supplement to v. 4, 1953, Budapest.)

SO: Monthly List of East European Accessions, Library of Congress, Vol. 3, No. 6, June. 1954, Uncl.

BAGDY, D.

Chemical Abst.
Vol. 48 No. 3
Jan. 10, 1954
Biological Chemistry

(3)
The polysaccharide of fibrinogen and fibrin. St. Szára and D. Bagdy (Med. Univ., Budapest). *Acta Physiol. Acad. Sci. Hung.* 4, 229-33 (1953) (in German); cf. C.A. 47, 10029g. — Purified beef fibrin gave a pos. Molisch reaction which indicated the presence of polysaccharide. Paper chromatographic analysis (BuOH-AcOH development) of hydrolyzates prepd. from purified fibrin (human, beef, horse, sheep, and rabbit) and from fibrinogen (beef and rabbit) indicated the presence of galactose, mannose, and glucosamine in these proteins. The hexose content of the fibrinogen varied between 1.13 and 1.73%, and the glucosamine content varied between 0.48 and 0.60% (ratio of glucosamine to hexose was between 0.32 and 0.42) depending on the source. Fibrin contained 16-18% less hexose but the same % of glucosamine as fibrinogen from the same source.
M. G. Horowitz

BAGDY, D., SZILAGYI, T.

" New Data for the Mammal Specificity of Fibrinogen" p.245, (KISERLETES
ORVOSTUDOMANY. Vol.5, No.4, July 1953, Budapest, Hungary).

S0: Monthly List of East European Accessions. L.C., Vol.2, No.11, Nov.1953
Uncl.

BAGDY, D.

"Fibrin products." p. 226. (Magyar Kemikusok Lapja, Vol. 8, no. 8, Aug 1953, Budapest)

SO: Monthly List of East European Accessions, Vol 3, No 2, Library of Congress, Feb 54 Uncl

BAGDY D. and SZÁRA I.

Forsch. Inst. für industr. Pharm., Biochem. Lab. der Landesheilanst. für Nerven-und Geisteskrankh., Budapest. *Wirkung von Thrombin auf die Polysaccharide des Fibrinogens. Action of thrombin on the polysaccharides of fibrinogen ACTA PHYSIOL. ACAD. SCIENT. HUNG. (Budapest) 1954, 5/suppl. (14-15)

^C
SO: EXERPTA MEDICA, Section II Vol. 7 No. 11
^A

max. the splitting of hexoses starts before the gel formation
begins and reaches its max. before the clotting of fibrinogen
by the diluted thrombin solution is complete. The splitting
of the hexoses is due to the catalytic effect of throm-
bin on the hexoses, which is not inhibited by the gel formation.

EIDUS, Laszlo.; CLAUDER, Otto.; RAGDY, Daniel.; TOKA, Jozsef.

Use of lyophilized cattle plasma in culture of Mycobacterium tuberculosis. Kiserletes orvostud. 7 no.2:150-153 Mar 55.

1. Budapesti Orvostudományi Egyetem I. sz. Belgyógyászati Klinikája és Tudorvgyászati Klinikája.
(PLASMA,

lyophilized, in culture of M. tuberc.)
(MYCOBACTERIUM TUBERCULOSIS, culture
medium, lyophilized plasma in)
(CULTURE MEDIA
for M. tuberc., lyophilized plasma in)

SZILAGYI, Tibor.; BAGDY, Daniel.; KOCSAR, Laszlo.

Antigenic properties of fibrin. II. Experiences with implantation and anaphylaxis. Kiserletes orvostud 7 no.4:424-427 July 55.

1. Debreceni Orvostudományi Egyetem Kóselettani Intézet és Gyógyszeripari Kutatóintézet Biochemiai osztálya.

(ALLERGY, experimental,

anaphylaxis caused by fibrin)

(FIBRIN, effects,

anaphylaxis)

AFRA, Denes, dr.; CSANDA, Endre, dr.; BAGDY, Daniel, dr.; GERENDAS,
Mihaly, dr.

Use of fibrin from cattle plasma. Orv. hetil. 96 no.4:97-99
23 Jan 55.

1. Az Orvostudományi Egyetem Anatómiai Intézete, a Nephadsereg
Egészségügyi Szolgálat és Gyógyszeripari Kutatóintézet közleménye.
(FIBRIN,
cattle plasma fibrin, use)

100-447. U.
AFRA, D.; BAGDY, D.; GERENDAS, M.

Experimental studies on the absorption of fibrin films, and their use in neurosurgical practice. Acta med. hung. 11 no.1:1-29 1957.

1. Staatliches Institut fur Neurochirurgie, Forschungsinstitut der Arzneimittelindustrie und Staatlicher Blutversorgungsdienst, Budapest.
(HEMOSTATICS

fibrin films & tubes, exper. studies on absorp. & tissue reactions & use in neurosurg. (Ger))
(NERVOUS SYSTEM, surg.
fibrin films & tubes in (Ger))

BAGDY, D.; BANGA, I.B.

Extraction and purification of elastase from dried pancreas. Acta physiol. hung. 11 no.3-4:371-376 1957.

1. Department of Biochemistry of the Research Institute of Pharmaceutical industry and 1st Institute of Pathology and Experimental Cancer Research Medical University, Budapest.

(PROTEASES, determ.

elastase extraction & purification from porcine pancreas)

(PANCREAS, metab.

same)

EXCERPTA MEDICA Sec 2 Vol 12/10 Physiology Oct 59

4480. ELECTROPHORETIC PROPERTIES OF PURIFIED ELASTASE - Tisztított elasztáz elektroforetikus tulajdonságai - Bagdy D., Banga I. and Horváth M. Gyógyszeripari Kutató Int. és Budapest Orvostud. Egyet. I. sz. Kórvonctani és Kísérleti Rákkutató Int. - KISÉRL. ORVOSTUD. 1958, 10/6 (580-594) Graphs 2 Tables 1 Illus. 1

The isolation of a purified preparation of elastase is described. During purification it is chiefly the mucolytic component that is removed and this is isolated in crystalline form. The purified elastase shows 3 sharply-separated components in paper and tiselius electrophoresis. In the latter a very fast 4th component can also be demonstrated.

KOVACS, K.; BAGDY, D.

The use of elastase in the treatment of chronic suppurative pulmonary diseases. Acta med. hung. 12 no.3-4:167-176 1958.

1. Department of Tuberculosis, 4th District Hospital, and Biochemical Department, Pharmaco-Industrial Research Institute, Budapest.

(PROTEASES, ther. use

elastase in suppurative lung dis.)

(LUNG DISEASES, ther.

elastase in suppurative dis.)

KOVACS, Kalman, Dr.; BAGDY, Daniel, Dr.

Elastase in the therapy of chronic suppurations of the lungs. Orv.
hetil. 99 no.23:774-778 8 June 58.

1. A IV. ker. Fovarosi Kozkorhaz (ujpesti Varosi Korhaz) Tudobeteg-
Osztalyanak (igazgato-tudogyogysz-foorvos: Devenyi Rudolf dr. kivalo
orvos) es a Gyogyszeripari Kutato Intezet (igazgato: Vargha Laszlo dr.
akademikus) Biokemiai Osztalyanak (vezeto: Bagdy Daniel dr. az orvos-
tudomanyok kandidatusa) kozlemenye.

(LUNG DISEASES, ther.

suppurative dis., chronic, elastase ther. (Hun))

(PROTEASES, ther. use

elastase in chronic suppurative dis. of lung (Hun))

KOVACS, K., dr.; BAGDY, D., dr.; TOLNAY, P., dr.

The properties and therapeutic use of elastase. Ther.hung.
7:39-44 '59.

1. Municipal Hospital of Ujpest, Second Tuberculosis Department
and the Biochemical Department of the Pharmaceutical Research
Institute, Budapest.

(PROTEASES ther)

(LUNG ABSCESS ther)

BORSY, J.; CSAK, ZS, A.; LAZAR, I.; BAGDY, D.

Pharmacological actions of Pancreatic elastase. Acta physiol. hung.
15 no.4:345-362 1959

1. Institute for Pharmacoindustrial Research, Budapest.
(PROTEASIS, pharmacology)
(PANCREAS, metabolism)

BAGDY, D.; BALO, J; BANGA, I.

Chemical properties and biological effect of elastic enzyme. p.89

MAGYAR KEMIAI FOLYOIRAT. Budapest, Hungary. Vol. 65, no. 3, March 1959

Monthly List of East European Accessions (EEAI), LC. Vol. 8, No. 9, September 1959
Uncl.

BALÓ, József; BANGA, Ilona; BAGDY, Daniel

Chemical properties and biological effect of elastase enzymes.
Magy kem folyoir 65 no.3:89-91 Mr '59.

1. Budapesti Orvostudományi Egyetem I. Kóronctani és Kísérleti
Rakutató Intézete és a Gyógyszeripari Kutatóintézet.

BAGDY, Daniel, az orvostudományok kandidátusa; TOLNAY, Pal; BORSY, Jozsef;
KOVACS, Kalman

Chemical, biological and pharmacological properties of the elastase
and its pharmaceutical. Biol orv kozl MTA. 11 no.2/3:277-291 '60.

(EEAI 10:5)

1. Gyogyszeripari Kutato Intezet Biokemiai Osztalya, IV. ker. Varosi
Korhaz II. TBC-osztalya.

(ELASTASE)

BAGDY, D.; FALK, Martha; TOLNAY, P.

Inhibition of elastase by trypsin-inhibitors. A preliminary note.
Acta physiol. 21 no.2:123-126 '62.

1. Department of Biochemistry, Institute for Pharmacindustrial
Research, Budapest.
(PROTEASES antagonists) (TRYPSIN antagonists)

TOLNAY, P.; BAGDY, D.

On chemical and biochemical properties of some derivatives of elastase.
Acta physiol. 21 no.2:119-121 '62.

1. Department of Biochemistry, Institute for Pharmacoindustrial Research,
Budapest.
(PROTEASES chemistry)

BAGDY, Daniel; TOLNAY, Pal

The effect of protease-inhibitors of plant origin on blood coagulation.
Kiserl. orvostud. 14 no.4:430-435 S '62.

1. Gyogyszeripari Kutato Intezet Biokemiai Osztalya.
(PEPTIDE HYDROLASES) (PLANTS, EDIBLE) (BLOOD COAGULATION)

HUNGARY

BAGDY, Daniel, Dr; Research Institute of the Pharmaceutical Industry,
Department of Biochemistry (Gyógyszeripari Kutató Intézet, Biokémiai
Osztály), Budapest.

"Theoretical and Practical Aspects of Blood Clotting."

Budapest, Orvosi Hetilap, Vol 104, No 18, 5 May 63, pages 817-821.

Abstract: The author presents a literature survey on various aspects of blood clotting. The preparation of crystalline fibrinogen, its properties as a reducing agent, the carbohydrate content of fibrinogen and fibrin and the analysis of fibrin are discussed. The conversion of fibrinogen to fibrin, the relationship among various vertebrate fibrinogens and the preparation of fibrin products from cattle fibrinogen are presented. Animal experiments with fibrin products, their reaction with tissues, their absorption and an extended survey on the therapeutic applications are given. 41 Eastern European, 23 Western references.

1/1

POLAND-HUNGARY

BAGDY, D, Biochemical Division of the Pharmaceutical Industry Research Institute in Budapest (Hungary) [Original version not given] [Translated by Tadeusz FARYNA, Dr. med. (Affiliation not given)]

"On the Theory and Practice of Blood-Clotting Problems."

Warsaw, Polski Tygodnik Lekarski, Vol 18, No 19-20, 6-13 May 63, pp 697-701.

Abstract: [Author's English summary modified] Research at the Institute revealed that fibrin preparations from animal plasma are cheaper and more easily prepared than from human plasma. They give no tissue reaction and are well tolerated. Thus, such fibrin powder with lyophilized thrombin may be used to arrest hemorrhage, and its membranes, tubes, and other preparations for bone anastomoses may be used in surgery. There are 64 references, more than half in Hungarian, of the others two (2) being in Russian, about 10 in German, and about 15 in English sources. About 30 of the references are to the works of the author and his co-workers.

1/1

BAGDY, Daniel, Jr.

Analysis of drug consumption. Nepegeszsegugy 44 no.6:168-174
Je '63.

1. Kozlemeney az Egeszsegugyi Tudomanyos Tanacs Titkarsagarol.
(DRUG INDUSTRY)

SZABO, Ilona, K.; BAGDY, D.; CSEH, C.

Studies on the correlation between lipoprotein lipase activity and clotting of blood plasma. Acta physiol. acad. sci. Hung. 28 no.4:309-317 ' 65.

1. Department of Biochemistry, Research Institute for Pharmaceutical Chemistry, Budapest. Submitted March 4, 1965.

L 30123-66

ACC NR: AT6020335

SOURCE CODE: HU/2505/65/028/004/0309/0317

AUTHOR: Szabo, Ilona K.; Bagdy, Daniel; Csah, Gyorgy

ORG: Department of Biochemistry, Research Institute for Pharmaceutical Chemistry,
Budapest (Gyogyszerkutato Intezet Biokemiai Osztalya)

TITLE: Studies on the correlation between lipoprotein lipase activity and clotting
of blood plasma

SOURCE: Academia scientiarum hungaricae. Acta physiologica, v. 28, no. 4, 1965,
309-317

TOPIC TAGS: blood plasma, enzyme, protein, biochemistry, animal physiology

ABSTRACT: The lipoprotein lipase activity of human plasma was investigated in connection with the clotting system. In citrated plasma the onset of coagulation leads to appearance of lipoprotein lipase activity, regardless of whether clotting is caused by recalcification, addition of thromboplastin or thrombin. When thromboplastin is added, lipoprotein lipase activity appears in the citrated plasma, in contrast to hirudinized plasma. Enzyme activity decreases with increasing thromboplastin concentration. By contrast, thrombin causes an increase of lipoprotein lipase activity both in citrated plasma and at a certain thrombin:hirudin ratio in hirudinized plasma samples. In isolated fibrinogen-thrombin systems a factor appeared which, when added to plasma, brought about an increase of lipoprotein lipase activity without coagulation. Orig. art. has: 2 figures and 4 tables. [Based on authors' Eng. abst.] [JPRS]

SUB CODE: 06 / SUBM DATE: 04Mar65 / ORIG REF: 001 / OTH REF: 018 / SOV REF: 001
Card 1/1 OLR

USSR

Intensity of respiration of summer and winter wheat
relative to the point of development
U. M. Mironov State Univ., Rostov-on-Don
Nauk S. S. R. Ser. Biol. 1954, No. 6, 2-10. Sprouts of
vernalized winter wheat show more intensive respiration
than the nonvernalized specimens or those of the summer
wheat. In normal summer wheat the intensity of respiration
decreases with plant development in a typical
manner. In vernalized wheat the intensity of respiration
increases with plant development in a typical
manner. The intensity of respiration in vernalized wheat
is higher than in nonvernalized wheat. The intensity of
respiration on the plant is a result of combination of
2 factors: age and its stage of growth and development.

USSR/Cultivated Plants. Grains.

11

Abs Jour : Ref Zhur-Biol., No 15, 1958, 68099

Author : Bagdykov, N. I., Matukhin, G. P.

Inst : Rostov University.

Title : Anatomical Changes of Barley in Connection
with Adaptation to Soil Salination.

Orig Pub : Uch. zap. Rostovsk.-n/D un-ta, 1957, 28,
85-96

Abstract : The soil was made saline (pot experiments) by
adding a Vant Goff-Richter salt solution (0.25 n,
based on soil moisture). The soil moisture was
held at a level of 60 percent of full moisture
capacity. The plants cultivated on the saline
soil were analysed on the first, second, third,
and fifth years. Salination significantly redu-

Card : 1/2

USSR/Chemistry - Kaolinite
Chemistry - Crystalline Structure

Sep 1947

"The Crystalline Structure of Kaolinite," V. M. Vartsner, G. C. Bagdyk'yants,
Z. G. Pinsker, State Optical Inst, and Inst Geochem and Analytic Chem imeni Acad
V. I. Vernadskiy, Acad Sci USSR, 3 $\frac{1}{2}$ pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVII, No 9

Describes results obtained in electronographic studies of kaolinite. Photographs made by means of electron microscope produced by State Optical Institute. Advantage of electronographic method is permits obtaining of data supplementary to data obtained by means of electron-microscope. Authors express gratitude to Academician A. A. Lebedev. Submitted by latter, 11 Mar 1947/

PA 53T19

BAGDYK'YANTS, G. O.

USSR/Metals, Minerals - Structure, Test- Dec 50
ing Equipment

"Universal Electronograph," G. O. Bagdyk'yants

"Zavod Lab" No 12, pp 1445-1449

Most convenient way for studying cryst structure of thin layers of materials (0.1-0.01 micron) is diffraction of fast electrons. Device for such investigations, the electronograph, consists of electron gun, electromagnetic lens, chamber for specimens, photographic camera, vacuum equipment and high-voltage supply unit.

182T88

BAGDYK'YANTS, G.O.

An industrial model of the EM-4 electronograph. Izv. Akad. Nauk SSSR, Ser.
Fiz, 17, No.2, 255-64 '53. (MLRA 6:8)
(PA 56 no.672:8444 '53)
(EEA 56 no.672:8444 '53)

BAGDYK'YANTS, G.O.

"X-Ray Shadow Microscopy," by G. O. Bagdyk'yants, State Order
of Lenin Optical Institute imeni S. I. Vavilov, Biofizika,
Vol 1, No 4, 1956, pp 341-345

Investigations in the field of X-ray shadow microscopy are reviewed. The article concludes that it is possible to construct, with existing technical resources, an X-ray microscope with a resolving power approaching that of the optical microscope. The author states that a resolving power of 0.1 micron appears feasible. (U)

Sum in 1467

BAGDYKANTS - G-L

author's conclusions that the methods described in earlier American and Russian papers for producing finely-dispersed preparations of $\text{Na}_2\text{O}-\text{SiO}_2$ glasses lead to the formation of crystals on the surface of the glass, but the dense crystals form as a result of the solution of the crystals deteriorates the mechanical properties of the surface of the glasses.

"APPROVED FOR RELEASE: 06/06/2000

CIA-RDP86-00513R000103010014-1

pherc. (1 figs. 1 table.)

15. V. D3KUVK YSnta. *Sichle. i. Korum. 10, no. 4, 11-12, 7*
114 (1955). The samples of sizes of the custom *Na. 1955*
115 1955 made of *Na. 1955*

APPROVED FOR RELEASE: 06/06/2000

CIA-RDP86-00513R000103010014-1"

BAGDYK'YANTS

USSR / Physical Chemistry. Crystals.

B-5

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 25870

Author : G.O. Bagdyk'yants.

Inst : Academy of Sciences of USSR

Title : Sector Method in Electronography

Orig Pub : Izv. AN SSSR, Ser. fiz., 1956, 20, No 7, 838-842

Abstract : A computation method of the sector profile (C) is proposed. This method excludes the necessity of intensity determination and of considering all sorts of scattering that cause the superposition of a non-uniform background on the molecular scattering. A series of microphotographs of the substance, for which C is computed, is obtained and these photographs are made under unchanging experimental conditions, but with various exposures. A straight line answering the equal blackening density is drawn parallelly to the darkness line. The intersection points of the straight line with the background line on each of the microphotographs allow to establish the relation among the exposures in various annular zones of an electron diffraction picture in

Card

: 1/2

USSR / Physical Chemistry. Crystals.

B-5

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 25870

Abstract : order to obtain the equal blackening density of the background and to determine the aperture angle C for any value of its radius. In connection with the non-uniform distribution of the scattering intensity on the electron diffraction picture, a corrected value of aperture angles is accepted: $Q'_\lambda = S'/S_\lambda \times Q_\lambda$, where Q'_λ and Q_λ are the corrected and initial values of the aperture angle, S' is the corrected constant density value, S_λ is the value of the blackening density obtained experimentally with C . In order to determine the true intensity distribution it is necessary to introduce a correction factor inversely proportional to the aperture angle of the C solution and to take the thickness of the layer under study differing only a little from that accepted for the computation of C .

Card : 2/2